

# Mineral Industry Surveys

### For information, contact:

William E. Brooks, Acting Silver Commodity Specialist U.S. Geological Survey 989 National Center Reston, VA 20192

Telephone: (703) 648-7791 Fax: (703) 648-7757

E-mail: wbrooks@usgs.gov

Mahbood Mahdavi (Data) Telephone: (703) 648-7778 Fax: (703) 648-7975

E-mail: mmahdavi@usgs.gov Wanda G. Wooten (Mine data) Telephone: (703) 648-4980 Fax: (703) 648-7975

E-mail: wwooten@usgs.gov

**Internet:** http://minerals.usgs.gov/minerals

## **SILVER IN DECEMBER 2005**

U.S. mines produced 1,220,000 kilograms (kg) of silver in 2005, a 2% decrease compared with 2004 production of 1,250,000 kg, according to the U.S. Geological Survey. U.S. mines produced 98,400 kg of silver in December, a 7% increase compared with November production of 92,000 kg. U.S. silver production decreased by 16%, compared with December 2004 production of 117,000 kg.

Engelhard Industries' average silver price for December was \$8.67 per troy ounce, a 10% increase from the average November price of \$7.87 per troy ounce and 22% more than the average December 2004 price of \$7.12 per troy ounce.

For 2005, Hecla Mining Company (Coeur d'Alene, ID) reported producing 6 million troy ounces (187,000 kg) of silver at an average cost of \$2.96 per ounce. Hecla reported producing 2.4 million troy ounces (74,600 kg) of silver from the Lucky Friday Mine in Idaho and 2.9 million troy ounces (90,200 kg) of silver from its share of the Greens Creek Unit in Alaska (Hecla Mining Company, 2006§<sup>1</sup>).

As of December 31, 2005, Revett Minerals Inc. (Spokane Valley, WA) reported that proven and probable ore reserves at the Troy Mine increased to about 10.9 million metric tons (Mt) from 7.9 Mt as of December 31, 2004. This represents an increase in the operating life of the Troy Mine of approximately 1.4 years (Revett Minerals Inc., 2006§).

Coeur d'Alene Mines Corporation (Coeur d'Alene, ID) indicated that discovery of new high-grade silver- and goldbearing vein systems in the Cerro Bayo district in Chile and in the Martha district in Argentina would ultimately add to Coeur d'Alene Mines Corporation's mineral reserves. A 2-meter intercept at Cerro Bayo was reported to have a grade of more than 1,000 grams per metric ton (g/t) silver and 32 g/t gold. A 3.9-meter intercept at Martha was reported to have from 600 to 2,700 g/t silver (Coeur d'Alene Mines Corporation, 2006§).

#### **Internet References Cited**

Coeur d'Alene Mines Corporation, 2006 (January 4), Coeur announces discovery of two significant vein systems at South American mines, accessed February 17, 2006, via URL http://www.coeur.com.

Hecla Mining Company, 2006 (February 14), Hecla Reports 2005 year-end results and reserves, looks forward to 2006, accessed February 21, 2006, via URL http://www.hecla-mining.com.

Revett Minerals Inc., 2006 (January 19), Revett Minerals reports increase in ore reserves and extension of mine life at Troy, accessed February 17, 2006, via URL http://www.revettminerals.com.

<sup>&</sup>lt;sup>1</sup>References that include a section mark (§) are found in the Internet References Cited section.

# $\label{thm:constraint} \begin{array}{c} \text{TABLE 1} \\ \text{MINE PRODUCTION OF RECOVERABLE SILVER} \\ \text{IN THE UNITED STATES, BY STATE}^1 \end{array}$

# (Kilograms)

		Other		
	Nevada	States <sup>2</sup>	Total	
2004: <sup>p</sup>				
December	34,100	82,500	117,000	
January-December	302,000	944,000	1,250,000	
2005:				
January	15,700	102,000	118,000	
February	20,400	95,300	116,000	
March	26,000	87,300	113,000	
April	22,200	76,600	98,800	
May	17,600	77,500	95,100	
June	25,900	81,600	108,000	
July	21,300	73,500	94,800	
August	W	99,300	99,300	
September	W	97,200 <sup>r</sup>	97,200 <sup>r</sup>	
October	W	88,000	88,000	
November	W	92,000 <sup>r</sup>	92,000 <sup>r</sup>	
December	– W	98,400	98,400	
January-December	169,000	1,050,000	1,220,000	

Preliminary. Revised. W Withheld to avoid disclosing company proprietary data; included with "Other States."

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes Alaska, Arizona, California, Colorado, Idaho, Missouri, Montana, Utah, and Washington.

# TABLE 2 SILVER PRICES

(Dollars per troy ounce)

Engelhard Industries:	
2004:	<del></del>
Low/date	5.60 May 13
High/date	8.23 Apr. 7
Average	6.69
2005:	
October:	<del></del>
Low/date	7.41/3 and 5
High/date	7.89/27
Average	7.70
November:	
Low/date	7.43/1
High/date	8.33/29
Average	7.87
December:	
Low/date	8.33/21
High/date	9.17/12
Average	8.67
Year to date:	
Low/date	6.42 Jan. 4
High/date	9.17 Dec. 12
Average	7.34
Handy and Harman:	
2004, Average	6.69
2005:	
October	7.70
November	7.87
December	8.69
Year to date	7.34
London Final:1	
2004, Average	6.65
2005:	
October	7.67
November	7.87
December	8.64
Year to date	7.32
1D C /I	IC E! "

<sup>&</sup>lt;sup>1</sup>Reported as "London Spot/US Equiv."

Source: Platts Metals Week.

 $\label{eq:table 3} \text{U.S. IMPORTS OF SILVER, BY COUNTRY}^1$ 

	Bullion		Doré		Ores and co	ncentrates <sup>2</sup>	Ash and residues		Total	
	Silver		Silver		Silver		Silver		Silver	
	content	Value	content	Value	content	Value	content	Value	content	Value
Period and country	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)
2004	3,410,000	\$728,000	346,000	\$117,000	2,220	\$1,410	6,710	\$1,530	3,760,000	\$848,000
2005:	_									
September	257,000	58,700	34,700	9,620	433	318	204	68	292,000	68,700
October	285,000	68,600	30,500	10,200			196	71	315,000	78,900
November:										
Canada	173,000	41,100							173,000	41,100
Chile	6,000	1,490							6,000	1,490
Colombia			204	46					204	46
Germany	297	79							297	79
Honduras			52	13					52	13
Mexico	190,000	47,000	14,300 <sup>3</sup>	5,600					204,000	52,600
Panama	6 <sup>3</sup>	8							6	8
Peru	20,900	5,110	11,700	3,330					32,600	8,440
Philippines	66 <sup>3</sup>	11							66	11
Taiwan							129	35	129	35
Total	391,000	94,800	26,300	8,990			129	35	417,000	104,000
Year to date	3,540,000	810,000	278,000	81,100	433	318	2,170	666	3,820,000	892,000

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes silver content of base metal ores and concentrates.

<sup>&</sup>lt;sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

TABLE 4 U.S. IMPORTS OF SILVER, BY COUNTRY<sup>1</sup>

	Other unwrought silver (gross weight)		Metal pe (gross w		Silver (gross v		Semimanufact (gross w		Waste and scrap (gross weight)	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Period and country	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)
2004	342,000	\$69,600	27,400	\$6,920	289	\$66	52,300	\$11,900	2,020,000	\$162,000
2005:		,,	, , , , ,				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, ,-	,,	, , , , , , , , , , , , , , , , , , , ,
September	34,400	7,650	1,840	468	84	13	24,800	5,540	252,000	11,600
October	15,000	3,470	2,920	320	42	6	19,000	4,330	276,000	12,300
November:	- '	, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,				,	· · · · · · · · · · · · · · · · · · ·	,	
Brazil	- 								322	52
Canada	104 <sup>3</sup>	40							7,740	1,800
China	-						68	15	16,200	420
Colombia									1,010	37
Costa Rica	- 								136	22
Dominican Republic	- 								711	341
France	- 		5 <sup>3</sup>	2			2,100	453	44,000	142
Germany	77 3	14	493 <sup>3</sup>	143			3 <sup>3</sup>	2	544	1,360
Guatemala	- 								36	274
Honduras	- 								2	13
India	- 						(4) 3	3	20,400	102
Italy									112	1,520
Japan			394 <sup>3</sup>	67					6	110
Jordan									30	7
Malaysia			150 <sup>3</sup>	26						
Mexico	16,800	3,550							104,000	3,000
Netherlands	<del></del>		17 3	3						
Panama									30	214
Peru							10,000	2,470		
Philippines			66 <sup>3</sup>	11					3	35
Singapore									12	120
Switzerland	37	10								
Taiwan									3,840	8
United Kingdom									19,500	845
Total	17,000	3,610	1,130	251			12,200	2,940	218,000	10,400
Year to date	329,000	74,200	26,600	6,320	669	118	178,000	39,100	3,900,000	12,600

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Containing 99.5% or more by weight of silver.

<sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.

6

TABLE 5
U.S. EXPORTS OF SILVER<sup>1</sup>

	Bulli	ion	Do	ré	Ores and cor	ncentrates <sup>2</sup>	To	tal
	Silver		Silver		Silver	<u> </u>	Silver	
	content	Value	content	Value	content	Value	content	Value
Period and country	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)
2004	302,000	\$64,500	79,800	\$18,800	1,560	\$307	384,000	\$83,600
2005:	_							
September	2,370	542	6,310	1,430	30	7	8,720	1,980
October	25,300	7,290	8,080	1,910			33,400	9,200
November:								
Australia	552 <sup>3</sup>	43					552	43
Canada	599	155					599	155
Germany	125 3	22					125	22
Korea, Republic of					23 3	4	23	4
Mexico	50	14					50	14
Norway			524	135			524	135
Singapore			156	33			156	33
Switzerland			5,320	1,340			5,320	1,340
United Kingdom					62	17	62	17
Total	1,330	235	6,000	1,510	85	21	7,410	1,760
Year to date	163,000	45,200	122,000	32,600	3,560	809	289,000	78,500

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>&</sup>lt;sup>2</sup>Includes silver content of base metal ores and concentrates.

<sup>&</sup>lt;sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

TABLE 6 U.S. EXPORTS OF SILVER<sup>1</sup>

	Other unwr	•	-	Metal powder		itrate	Semimanufact		Waste an	•
	(gross v		(gross w		(gross w		(gross w		(gross v	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Period and country	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)	(kilograms)	(thousands)
2004	39,600	\$8,690	708,000	\$122,000	61,500	\$5,720	269,000	\$48,300	2,240,000	\$424,000
2005:	_									
September	1,340	358	68,200	11,600	10,800	1,190	18,700	3,250	231,000	50,400
October	1,180	301	83,800	14,300	4,370	168	24,000	4,150	251,000	52,900
November:	_									
Bahamas, The	100	22								
Belgium	21	6	354 <sup>3</sup>	65			237	40	9,960	2,220
Brazil							73 <sup>3</sup>	12		
Canada	4,390	1,250	2,250 3	384	3,740 <sup>3</sup>	126	13,200 <sup>3</sup>	2,250	75,000	11,000
China			1,310 3	224			281 3	50	57,200	7,330
Dominican Republic							143 3	24		
France	46	10	1,440 3	248			795 <sup>3</sup>	146		
Germany	51	11	6,940 <sup>3</sup>	1,180			756 <sup>3</sup>	133	31,900	20,800
Hong Kong			1,150 3	195			1,420 3	229	5,160	1,130
India							17 3	3	427	56
Israel							176 <sup>3</sup>	30		
Italy	- 		28 3	5			227 3	43	50,300	12,000
Japan	1 3	4	23,600 3	4,030			125 <sup>3</sup>	21	450	5,220
Jordan	200	53								
Korea, Republic of	- 		16,600 <sup>3</sup>	2,820	49 3	4	42 3	9	2,890	376
Malaysia	- 						470	79		
Mexico	87	19	1,020 3	176	1,440 <sup>3</sup>	39	1,840 <sup>3</sup>	349		
Netherlands	- 		417 3	78			666 <sup>3</sup>	113		
Nigeria	- 				127 3	5				
Saudi Arabia	<del>-</del>								16,300	2,700
Singapore	- 		63 <sup>3</sup>	11			469 <sup>3</sup>	82		
Slovenia	- 								385	50
Spain	- 						1,230 <sup>3</sup>	209		
Sweden	- 		3,180 3	540					4,040	1,340
Switzerland	- 						329 <sup>3</sup>	56		
Taiwan	- 		9,800 <sup>3</sup>	1,670			1,220 <sup>3</sup>	212	9,090	845
Thailand	- 						368 <sup>3</sup>	62		
United Kingdom	- 		9,120 3	1,560			490 <sup>3</sup>	83	1,080	215
Other	- 79	18	68 <sup>3</sup>	12			53 <sup>3</sup>	10		
Total	4,970	1,390	77,400	13,200	5,360	173	24,600	4,240	264,000	65,200
Year to date	19,100	4,910	730,000	125,000	52,300	3,940	285,000	50,400	2,540,000	512,000

<sup>--</sup> Zero.

<sup>&</sup>lt;sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown. <sup>2</sup>Containing 99.5% or more by weight of silver.

<sup>&</sup>lt;sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.